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KILL THE COMMON BARBERRY WITH CHEMICALS.

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THE COMMON BARBERRY (*Berberis vulgaris* L.) when well established is a very difficult plant to kill. This is the conclusion reached after five years of effort to eradicate the common barberries from 13 of the North-Central States.

When the bushes are dug, even small fragments of roots left in the ground usually will sprout. This means that where the digging is difficult, as in rocky ground or around trees or stumps or when unusual care is not taken to remove all fragments of roots, sprouts are almost sure to develop. In lawns or gardens where a careful watch can be kept, the problem is not so serious, for in a year or two all roots left at the first digging will have sprouted and can be removed. With bushes growing wild in pastures and wood lots and along fences at a distance from the house, the situation is different, and other means of killing the bush are desirable.

The chemical methods herewith described were devised to make eradication simple and sure. It is urged that all escaped barberries and those growing where a slight sterilization of the soil for a few years will not be detrimental be chemically treated.

Two chemicals for the eradication of the common barberry are described and recommended in this circular. Others have been studied, of which some are satisfactory under certain conditions or at certain seasons, but their use is not recommended until further study is given them.

COMMON SALT.

Salt is easily obtainable in most places. Crushed rock salt, commonly called ice-cream salt, is preferable. Ordinary ground salt, such as is used in curing hides or for salting cattle, is satisfactory. Such salt usually can be secured in convenient 100-pound sacks at a cost of 50 cents to $1.25 per hundred pounds. It should be applied to the bush as dry salt and may be used at any season of the year with success.

Ten pounds of salt piled on the crown usually will kill a bush of average size. By this is meant one in which the clump of stems is not over 12 inches in diameter at the surface of the ground. Smaller bushes may not need so much, but no bush should receive less than 5 pounds. Larger bushes should receive proportionately more.

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A pail is convenient to use in applying the salt. A 10-quart pail holds a little over 20 pounds of salt, or enough for two average barberries. The salt should be poured into the center of the bush, so as to form a pile in the center of the crown. (Fig. 1.) Here it will remain, usually for several months, slowly dissolving and soaking into the soil. Where bushes are scattered, especially in woodlands, it usually is better to leave them standing. This enables the spot to be found readily to determine whether they have been killed or to locate possible sprouts. If the bushes are cut off, the tops should be burned if they are bearing seeds.

As the salt slowly dissolves and kills the barberry it will also kill all other vegetation immediately around where the salt was piled, but the area usually will not be larger than that which the bush occupied.

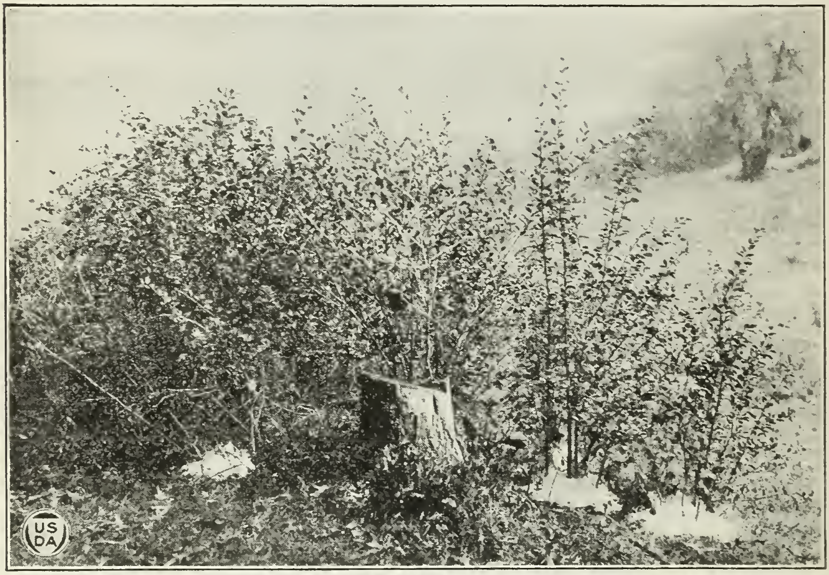

FIG. 1.—Killing barberry bushes with salt. Pile the salt in the center of the barberry, using about 10 pounds for an average bush and more for larger ones.

SODIUM-ARSENITE SOLUTION.

Sodium-arsenite solution is an efficient poison, but for the immediate future it probably will not be readily available commercially. When the substances composing it, namely, sal soda (sodium carbonate) and white arsenic (As_2O_3), are purchased separately, the cost probably will be prohibitive. In addition there is the labor and expense of making and boiling the mixture.

A sodium-arsenite solution which has been found completely effective in killing barberry bushes is a commercial preparation produced by a smelting and refining company in Utah as a byproduct and sold under the trade name " Weed Killer." It is put up in gallon cans, each stated to contain the equivalent of 8 pounds of white arsenic (As_2O_3). It retails at $1.25 per gallon at the point of manufacture. In use, 1 gallon of this commercial solution is diluted with 40 or 50 gallons of water. (Fig. 2.)

Two gallons of the dilute solution, or about all that can be carried in a 10-quart pail, are sufficient to kill an average bush that has a crown not over 12 inches in diameter at the surface of the ground. Less than 1½ gallons should never be used even for small bushes. For bushes larger than the average the quantity should be increased proportionately. (Fig. 3.) The solution should be poured into the center of the plant at the surface of the ground in such a way as to wet the base of every stalk. This treatment will sterilize the ground immediately around the bush about as salt does, but the effects will not last as long as with salt.

Unlike salt, the sodium arsenite is not effective at all times of the year. It should be used only during the growing season, or from about the first of May to the last of September. If applied later than September, it is not immediately absorbed by the bush and most of it washes out of the soil before spring. Unless sodium arsenite is found to be cheaper or more convenient, it probably will be best to depend on salt.

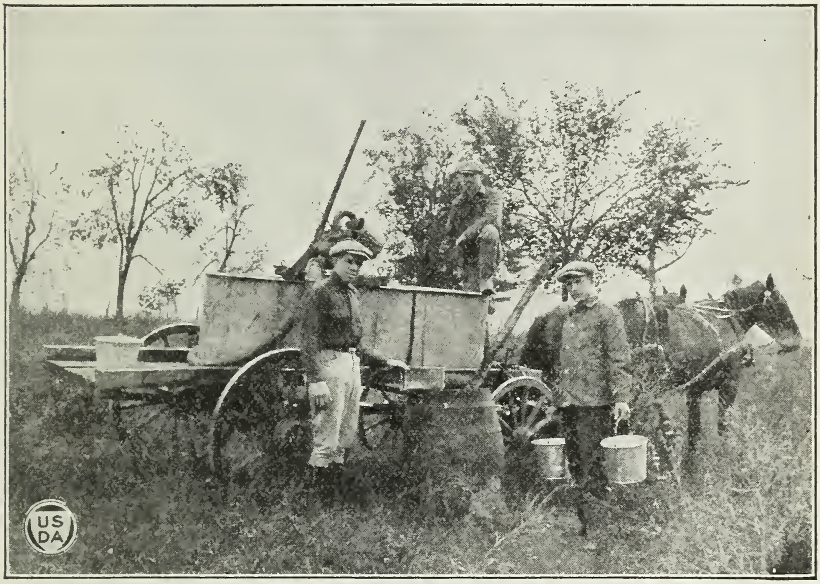

Fig. 2.—Killing barberry bushes with sodium arsenite. The sodium-arsenite solution can be conveniently mixed in a barrel in the field, using 1 gallon of the concentrated solution to the barrel. Water may be hauled to the field in a tank wagon or in other barrels. Apply the solution to the barberries with pails.

CAUTION.

Sodium arsenite is a violent poison and should be carefully handled. It is not any more poisonous than most orchard and garden sprays, but care should be used to keep children as well as stock and other animals away from the solution, and all pails and other containers should be carefully washed after using. Gloves should not be worn while handling the solution, as it has a slight corrosive action on the skin which is increased by the use of gloves.

As the sodium arsenite is applied to the ground and only very small amounts are absorbed by the plant, the danger to stock or other animals from eating the bushes is negligible. The poison is absorbed, however, by all parts of the barberry, and so the berries from treated bushes should not be used for eating or jelly making.

ANTIDOTE.

In case of poisoning, vomiting should be induced by tickling the throat with a finger or a feather, and an emetic, such as mustard or warm water, should be given at once. Milk or white of egg should be given, in order to induce more vomiting. A doctor should be called.

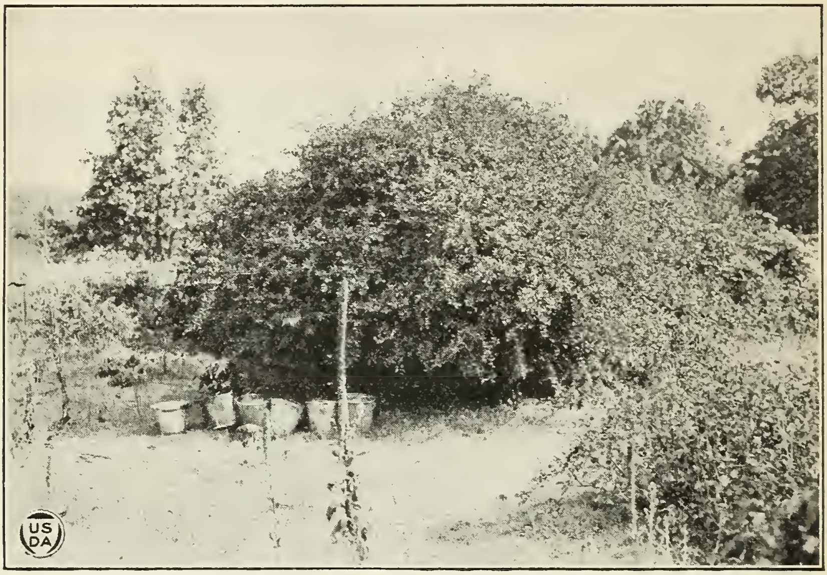

FIG. 3.—Sodium arsenite applied to barberry bushes. Use plenty of the dilute sodium-arsenite solution. This large clump was killed with six pailfuls, or about 12 gallons.

SUMMARY.

KILLING COMMON BARBERRIES WITH SALT.

Use 10 pounds of common salt, either crushed or ground, for an average bush and more for a very large one.

Pile the salt in the center of the crown of the bush.

The bush may be treated at any time of the year and may either be cut down or left standing.

KILLING COMMON BARBERRIES WITH SODIUM-ARSENITE SOLUTION.

Dilute 1 gallon of concentrated sodium arsenite with 40 or 50 gallons of water and use 2 gallons of this dilute solution for an average bush and more for a very large bush.

Pour the solution on the ground in the center of the bush, wetting the base of all stalks.

The best results are secured by treating the bush between May 1 and September 30 and by leaving the bush standing.

Sodium arsenite is a *poison*. Be careful!

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